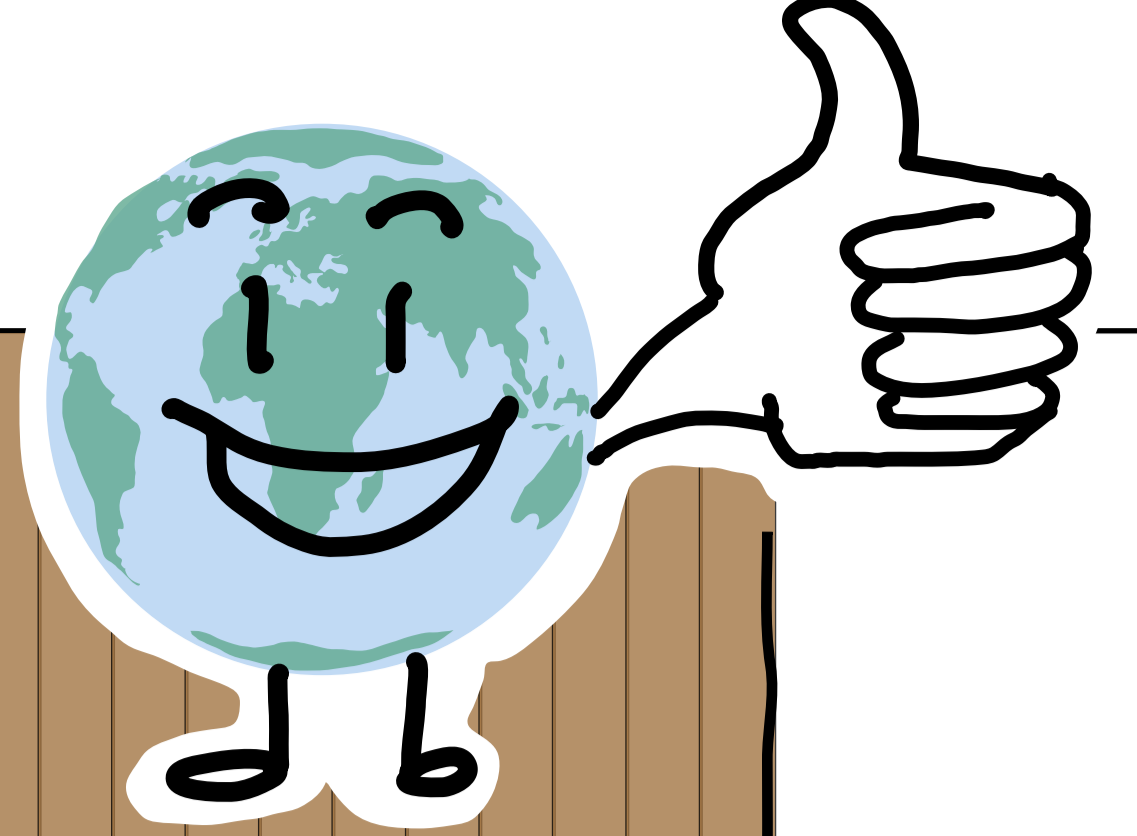


Showcase of sustainability practices in South Africa #7

Civic Centre Greening project in Buffalo City



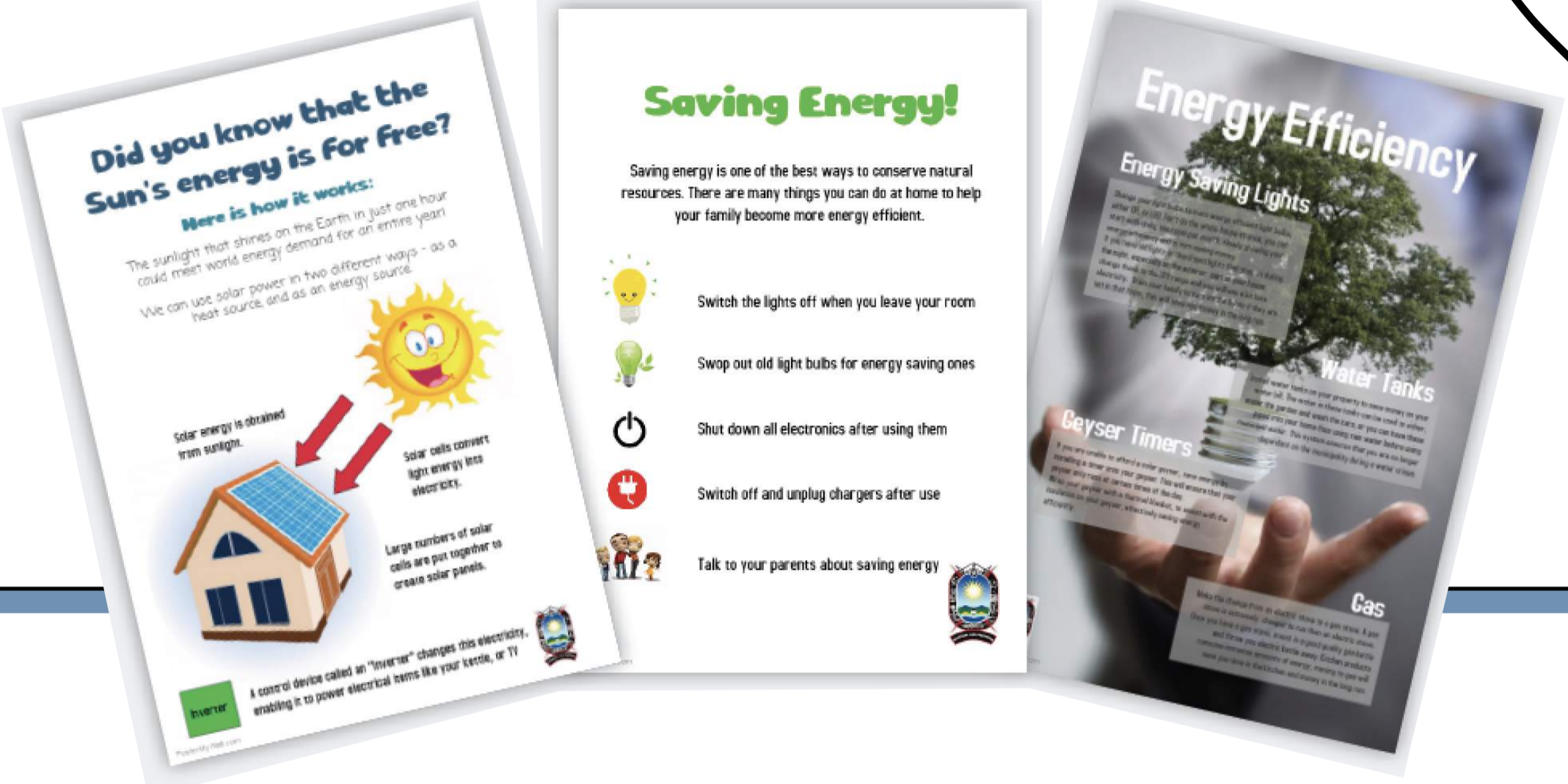
Hello everyone, I'm happy to present to you:

Buffalo City Energy and Financial Building, Beacon Bay

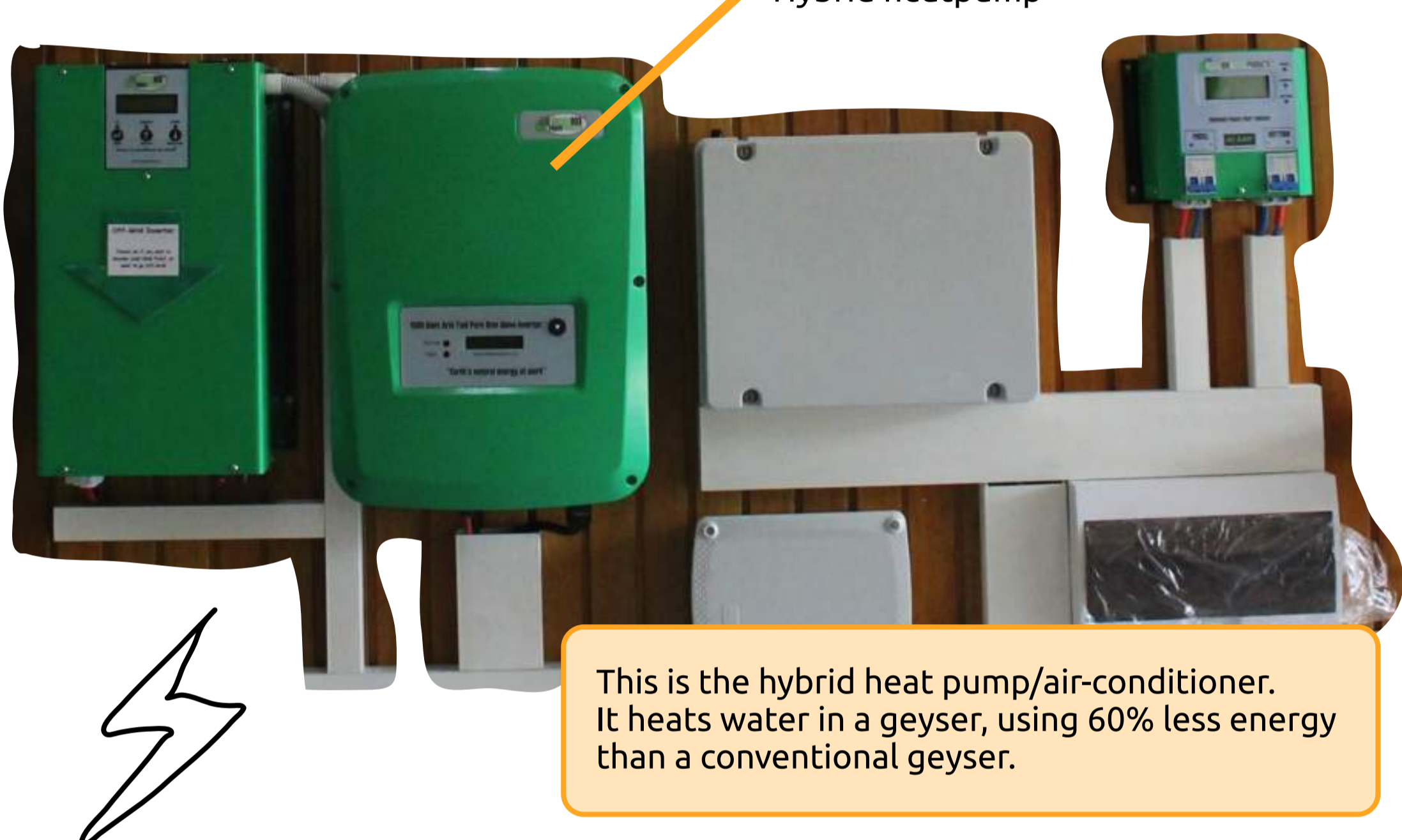


Reception

This building has been retrofitted for energy efficiency and for water harvesting. I will show you how we've done this and how you can implement in your own homes!



Energy efficiency



Hybrid heatpump

This is the hybrid heat pump/air-conditioner. It heats water in a geyser, using 60% less energy than a conventional geyser.



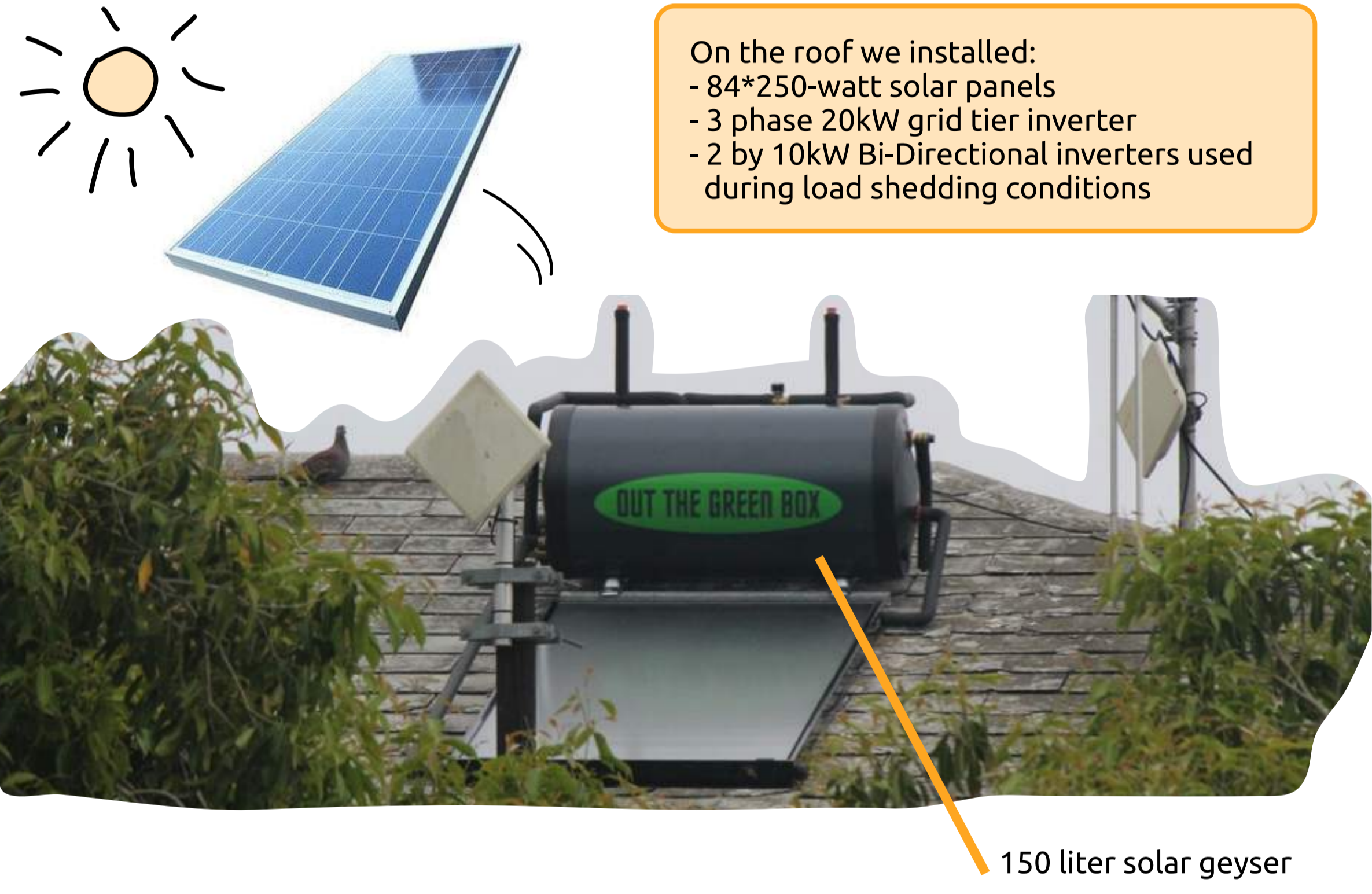
Air conditioner

Lighting



All lights are replaced with LED globes and we installed occupancy sensors on the lights, so they switch off if no one is in the room.

Renewable energy production

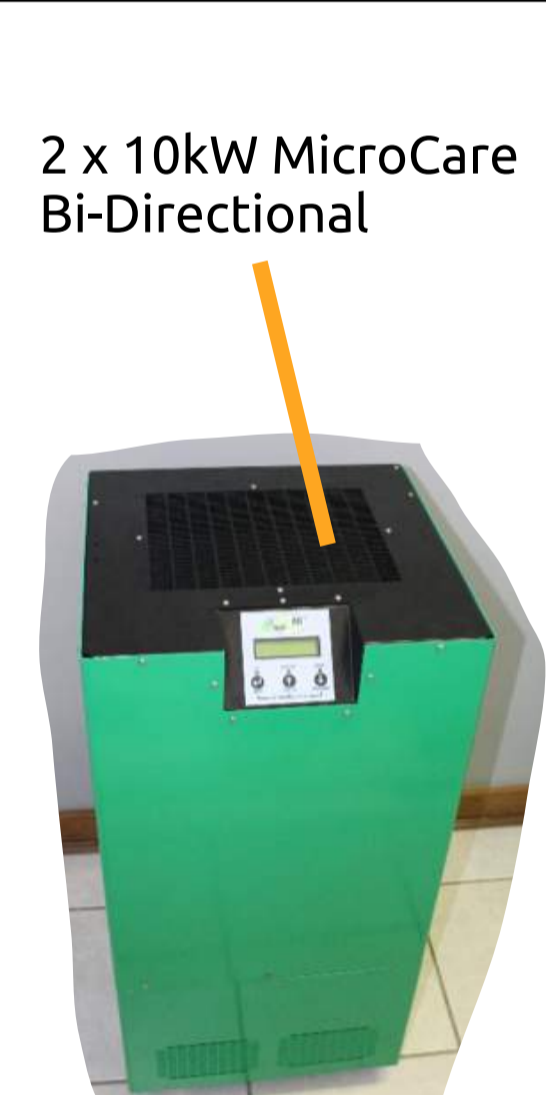


On the roof we installed:
 - 84*250-watt solar panels
 - 3 phase 20kW grid tier inverter
 - 2 by 10kW Bi-Directional inverters used during load shedding conditions

150 liter solar geyser



20kW Grid Tied ABB Inverter



2 x 10kW MicroCare Bi-Directional



600w micro wind turbine will assist battery charging

Measurement and monitoring system



Energy management system and diverse PV connection options and inverters

Water



7 water tanks for water harvesting



2 x 900ah battery bank for outages

Cost of retrofit



Impact

- The project savings will equal the capital layout in **18 months**.
- This project is putting **electricity back onto the grid**.
- Energy demand of building has been reduced by **35%**.
- **40%** of building's energy use is from renewables.

We intend to retrofit **many more municipal buildings**.

Partners

This project came out of a working relationship with the City of Oldenburg in Germany.

You can make changes to **your home** to save energy and water.

Please **help yourself** to the resources.

Credits

Research and story: **Kirsten Harrison and Tanya Zack**
 illustrations: **Willemijn Schellekens**
PhatTale_story_play_design
 Photos: Buffalo City Metropolitan Municipality
 Prepared for: **SACN**



More information see links below

